SEQUENCE LISTING

<110> Cobb. Melani	<1	10>	Cobb.	Melani	_
--------------------	----	-----	-------	--------	---

<120> TAO PROTEIN KINASE POLYPEPTIDES AND METHODS OF USE THEREOF

<130> 10624-026-999

<140> 09/686,346

<141> 2000-10-10

<150> 09/060,410

<151> 1998-04-14

<160> 26

<170> PatentIn version 3.0

<210> 1

<211> 3312

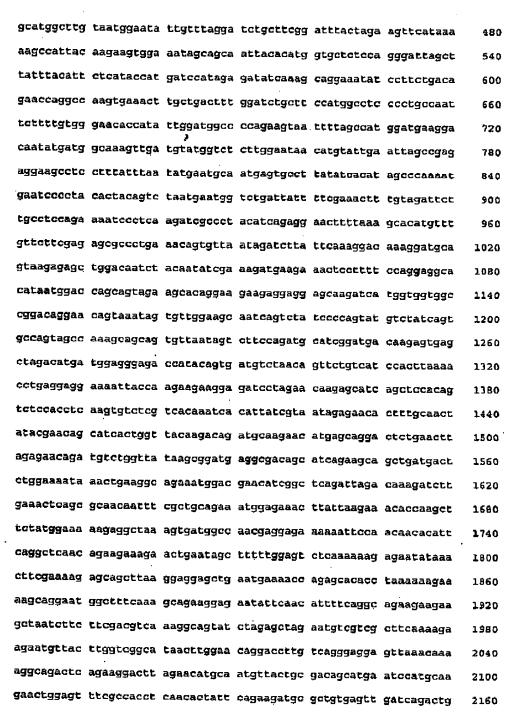
<212> DNA

<213> Rattus norvegicus

<400> 1

tetgeagtat ggtagattat tatttatgea tttatgeag tgtgggttea tteatacaga 60
tgaaccaage tttgggatag cagtataaaa ttagaateag acagetgaet geteageagg 120
atgecatcaa ctaacagage aggeagteta aaggaceetg aaategeaga getettette 180
aaagaagate eggaaaaaet etteacagat eteagagaaa teggeeatgg gagetttgga 240
geagtttatt ttgeacgaga tgtgegtaet aatgaagtgg tggeeateaa gaaaatgtet 300
tatagtggaa ageagtetae tgagaaatgg caggatatta ttaaggaagt caagttteta 360
caaagaataa aacateecaa cagtatagaa tacaaagget getatttaeg tgaacacaca 420

09/09/2003



			Bourneaucu	ogedead and	acygyancia	424 Z U
agacggaaac	atgtcatgga	agttegacag	cagcctaaga	gtttgaagte	taaagaactc	2280
caaataaaaa	agcagtttca	ggatacctgc	aaaattcaaa	ccagacagta	caaagcatta	2340
aggaateaee	tactggagac	tacaccaaag	agtgagcaca	Aagctgttct	gaaaagactc	2400
aaggaggaac	agactcggaa	gttagecate	ttggctgagc	agtatgatca	tagcattaat	2460
gaaatgetet	ccacacaagc	tclgcgtttg	gatgaagcac	aggaagcaga	<u>atgecaggtt</u>	2520
ttgaagatgc	agctacagca	ggaactggag	ctgttgaatg	catatcagag	cassatcaag	2580
atgcaggctg	aggeccaaca	tgatcgagag	cttcgagagc	tggaacaaag	ggtetecett	2640
cggagagc ac	tottagaaca	gaagattgaa	gaagagatgt	tggcttt g ca	gaatgaacgc	2700
acagaacgaa	tacgtagect	getegagege	caggccagag	aaattgaagc	ttttgac tc t	2760
gaaagcatga	gattaggttt	tagtaacatg	gtcctttcta	atototocco	tgaggcattc	2820
agccacaget	acccaggage	ttctagctgg	tctcacaatc	ctactggggg	ttcaggacet	2980
cactgg ggte	ateccatggg	tggcacacca	caagettggg	gtcatccgat	acsedacââs	2940
cccsaccat	ggggtcaccc	ctcagggcca	atgcaagggg	tacctcgagg	tagcagtata	3000
ggagtccgca	atagococca	ggctctgagg	cggacagett	ctgggggacg	gacggaacag	3060
ggcat gagca	gaagcacgag	tgtcacttca	caaatatcca	atgggtcaca	catgtettae	3120
acataataat	tgazagtggc	aattoogotg	gagetgtetg	ccaaaagaaa	ctgcctacag	3180
acatcagcac	agcagcctcc	tcacttgggt	actaccgggt	ggaaget gtg	catatggtat	3240
attttatteg	totttgtaaa	gcgttatgtt	ttgtgtttac	taattgggat	gtcatagtat	3300
ttggctgccg	33	٠	•			3312

<210> 2

<211> 1001

<212> PRT

<213> Rattus norvegicus

<400> 2

Met Pro Ser Thr Asn Arg Ala Gly Ser Leu Lys Asp Pro Glu Ile Ala 1 5 15

Glu Leu Phe Phe Lys Glu Asp Pro Glu Lys Leu Phe Thr Asp Leu Arg 20 25 30

P06

Glu Ile Gly His Gly Ser Phe Gly Ala Val Tyr Phe Ala Arg Asp Val Arg Thr Asn Glu Val Val Ala Ile Lys Lys Met Ser Tyr Ser Gly Lys Gln Ser Thr Glu Lys Trp Gln Asp Ile Ile Lys Glu Val Lys Pha Leu Glm Arg Ile Lya His Pro Asn Ser Ile Glu Tyr Lys Gly Cys Tyr Leu Arg Glu His Thr Ala Trp Leu Val Met Glu Tyr Cys Leu Gly Ser Ala Ser Asp Leu Leu Glu Val His Lys Lys Pro Leu Gln Glu Val Glu Ile Ala Ala Ile Thr His Gly Ala Leu Gln Gly Leu Ala Tyr Leu His Ser His Thr Met Ile His Arg Asp Ile Lys Ala Gly Asn Ile Leu Leu Thr 150 Glu Pro Gly Gln Val Lys Leu Ala Asp Phe Gly Ser Ala Ser Met Ala Ser Pro Ala Asn Ser Phe Val Gly Thr Pro Tyr Trp Met Ala Pro Glu Val Ile Leu Ala Met Asp Glu Gly Gln Tyr Asp Gly Lys Val Asp Val Trp Ser Leu Gly Ile Thr Cys Ile Glu Leu Ala Glu Arg Lys Pro Pro Leu Phe Asn Met Asn Ala Met Ser Ala Leu Tyr His Ile Ala Gln Asn Glu Ser Pro Thr Leu Gln Ser Asn Glu Trp Ser Asp Tyr Phe Arg Asn Phe Val Asp Ser Cys Leu Gln Lys Ile Pro Gln Asp Arg Pro Thr Ser Glu Glu Leu Leu Lys His Met Phe Val Leu Arg Glu Arg Pro Glu Thr 280 Val Leu Ile Aap Leu Ile Gln Arg Thr Lys Asp Ala Val Arg Glu Leu Asp Asn Leu Gln Tyr Arg Lya Met Lya Lya Leu Leu Phe Gln Glu Ala

330

His Asn Gly Pro Ala Val Glu Ala Gln Glu Glu Glu Glu Glu Gln Asp

His Gly Gly Gly Arg Thr Gly Thr Val Asn Ser Val Gly Ser Asn Gln

NO.881

D07

09/09/2003



345

350

Ser Ile Pro Ser Met Ser Ile Ser Ala Ser Ser Gln Ser Ser Ser Val 360

Asn Ser Leu Pro Asp Ala Ser Asp Asp Lys Ser Glu Leu Asp Met Met 375

Glu Gly Asp His Thr Val Met Ser Asn Ser Ser Val Ile His Leu Lys

Pro Glu Glu Glu Asn Tyr Gln Glu Glu Gly Asp Pro Arg Thr Arg Ala

Ser Ala Pro Gln Ser Pro Pro Gln Val Ser Arg Ris Lys Ser His Tyr

Arg Asn Arg Glu His Phe Ala Thr Ile Arg Thr Ala Ser Leu Val Thr 440

Arg Gln Met Gln Glu His Glu Gln Asp Ser Glu Leu Arg Glu Gln Met

Ser Gly Tyr Lys Arg Met Arg Arg Gln His Gln Lys Gln Leu Met Thr

Leu Glu Asn Lys Leu Lys Ala Glu Met Asp Glu His Arg Leu Arg Leu

Asp Lys Asp Leu Glu Thr Gln Arg Asn Asn Phe Ala Ala Glu Met Glu

Lys Leu Ile Lys Lys His Gln Ala Ser Met Glu Lys Glu Ala Lys Val 520

Met Ala Asn Glu Glu Lys Lys Phe Gln Gln His Ile Gln Ala Gln Gln

Lys Lys Glu Leu Asn Ser Phe Leu Glu Ser Gln Lys Arg Glu Tyr Lys

Leu Arg Lys Glu Gin Leu Lys Glu Glu Leu Asn Glu Asn Gln Ser Thr

Pro Lys Lys Glu Lys Gln Glu Trp Leu Ser Lys Gln Lys Glu Asn Ile

Gln His Phe Gln Ala Glu Glu Glu Ala Asn Leu Leu Arg Arg Gln Arg 500

Gln Tyr Leu Glu Leu Glu Cys Arg Arg Phe Lys Arg Arg Met Leu Leu

Gly Arg His Asn Leu Glu Gln Asp Leu Val Arg Glu Glu Leu Asn Lys

Arg Gln Thr Oln Lys Asp Leu Glu His Ala Met Leu Leu Arg Gln His 645 650

Met Arg Cys Glu Leu Ile Arg Leu Gln His Gln Thr Glu Leu Thr Asn 675 680 685

Gln Leu Glu Tyr Asn Lys Arg Arg Glu Arg Glu Leu Arg Arg Lys His 690 695 700

Val Met Glu Val Arg Gln Gln Pro Lys Ser Leu Lys Ser Lys Glu Leu 705 710 } 715 720

Gln Ile Lys Lys Gln Phe Gln Asp Thr Cys Lys Ile Gln Thr Arg Gln 725 730 735

Tyr Lys Ala Leu Arg Asn His Leu Leu Glu Thr Thr Pro Lys Ser Glu
740 745 750

His Lys Ala Val Leu Lys Arg Leu Lys Glu Glu Gln Thr Arg Lys Leu 755 760 765

Ala Ile Leu Ala Glu Gln Tyr Asp Bis Ser Ile Asn Glu Met Leu Ser 770 780

Thr Gln Ala Leu Arg Leu Asp Glu Ala Gln Glu Ala Glu Cys Gln Val 785 790 795 800

Leu Lys Met Gln Leu Gln Gln Glu Leu Glu Leu Leu Asn Ala Tyr Gln 805 810 815

Ser Lys Ile Lys Met Gln Ala Glu Ala Gln His Asp Arg Glu Leu Arg 820 825 830

Glu Leu Glu Gln Arg Val Ser Leu Arg Arg Ala Leu Leu Glu Gln Lys 835 840 845

Ile Glu Glu Met Leu Ala Leu Gln Asn Glu Arg Thr Glu Arg Ile 650 855 860

Arg Ser Leu Leu Glu Arg Gln Ala Arg Glu Ile Glu Ala Phe Asp Ser 865 870 875 880

Glu Ser Met Arg Leu Gly Phe Ser Asn Met Val Leu Ser Asn Leu Ser 885 890 895

Pro Glu Ala Phe Ser His Ser Tyr Pro Gly Ala Ser Ser Trp Ser His 900 905 910

Asn Pro Thr Gly Gly Ser Gly Pro His Trp Gly His Pro Met Gly Gly 915 920 925

Thr Pro Gln Ala Trp Gly His Pro Met Gln Gly Gly Pro Gln Pro Trp 930 935 940

Gly His Pro Ser Gly Pro Met Gln Gly Val Pro Arg Gly Ser Ser Ile 945 950 955 960

Gly Val Arg Asn Ser Pro Gln Ala Leu Arg Arg Thr Ala Leu Gly Gly

14:32

965

970

975

Arg Thr Glu Glu Gly Met Ser Arg Ser Thr Ser Val Thr Ser Glu Ile 980 985 990

Ser Asn Gly Ser His Met Ser Tyr Thr 995 1000

<210> 3

<211> 4296

<212> DNA

<400> 3

<213> Rattus norvegicus

aggggagget tecegggeee gecceteagg aagggegaaa getgaggaag aggtggegag ggggaaggte teettgeeee tetecceget tgteagagea actggagtae eecaggegga 120 agoggaggog etggggcace atagtgacee etaceaggea agateecaat tteagggeee 180 ccaggggcca teatgccage tggggggegg geogggagee tgaaggaeee tgatgtaget 240 gagetettet teaaagatga eestgagaag ettttetetg aceteeggga aattggeeat ggcagttttg gagetgtgta etttgcccgg gatgtccgga acagtgaggt ggtggccatc 360 aagaagatgt cetatagtgg gaagcaatca aatgagaaat ggcaggatat catcaaggag 420 gtgoggttet tacagaaget acggeateet aataceatte agtacegggg etgttacetg 480 agggagcaca cagcitgget ggigatggag taltgeolgg gilcagelic igaleliete gaagtgcaca agaagceget geaggaggta gagattgcag etgtgaceca tggtgegett 600 cagggeetgg eetatetaea tteacacaae atgatecata gagatgtgaa ggetgggaae 660 atottgotgt cagaaccagg ottggtgaaa otgggggact ttggotoogc atcoatcatg 720 gcacctgeca acteatttgt gggcacteca tactggatgg etccagaggt gatcctagec 780 atggatgagg gacaatatga tggcaaagtg gatgtetggt cettggggat aacetgtatt gagetagegg ageggaagee accaetgitt aacatgaatg caatgagige ettataceae 900 attgcacaga atgaateece tgeteteeag teaggacaet ggtetgagta etteeggaat 960 tttgttgact cetgtottca gasaatecet caagacagac caaceteaga ggttettttg 1020 aagcaccgot ttgtgetoog ggagoggoda cocacagtoa tcatggacct aattoagagg 1080 accaaggatg ctgtacggga actagataac ctgcagtacc gaaagatgaa gaagatacta ttecaagagg cacccaatgg cectggtget gaggeeccag aggaagagga ggaagcagaa 1200



P11

agggaccetg gagatggotg teetteccea gatatecece cagagecace tecateacat 3000 etgagacagt accorderag coagetteet ggattettgt etcatggeet cotgactgge 3060 ctctectttg cagtggggte etectctgge ctcttgecce tactacttct getgetactc 3120 ccattgetgg cacccaggtg gaggtggett gcaggcagca ctgctggecc ttgaggtagg 3180 actagtggge ctgggggett catacotgtt cetttgtaca getetacace tgecacecag 3240 tetgttetta eteetggete agggeactge actggggget gteettagee tgagetggeg 3300 cagaggeett atgggtgtge etetgggeet tggggetgee tggeteetag ettggeecag 3360 cotggettta eetetggeag etatggegge tgggggeaaa tgggtaegge ageaaggeee ccagatgcgt cggggcatct otcgactctg gttgcgggtt ctgctacgcc tgtcacccat 3490 ggtetttegg geeetaeagg gelgtgegge tglgggagae egggggelgt tlgecelgta 3540 ecetaagace aataagaatg gttteegaag tegaetgeet gteeertgge coegteaggg 3600 aaateetege aetacaeage acceaetage tetgttagea agagtttggg etetgtgeaa 3660 gggetggaac tggegectag caegggetag ccatagatta gettettgtt tgeeccectg ggotgttcat atactagota getggggeet gettaagggt gaaaggcoca gtoggatece 3780 teggetgeta eegegaagee aacgeegtet tgggetetea getteeegae agetaceace 3840 aggyactyta gotgygogga gatotoagac cogoaggyce etgoctocot gyagytaaco 3900 agtictance etceacecan atttagggen tigagenett tatetecent geetengtan 3960 agteteteca gtecettgge etetecteco ettetgacet ttettectea gtatgtttee ecaggiccaa teccageece agaigtagai tictagacag geageeteet etacigiga 4080 glecagaatg acactettgt gtttteecca gtecectaag ttattgetgt eccetgetgt 4140 gtgtgtgctc atcoteaecc teateggete aggeetgggg ceaggggtgg cagggaggga 4200 agtcatgggg gtttteccte titgattttg tttttetgte teeettecaa cetgteccet 4260 tecectecae caasagagaa aaasaaaaa aaasaa 4296

<210> 4

<211> 993

<212> PRT

Rattus norvegicus

<400>

Met Pro Ala Gly Gly Arg Ala Gly Ser Leu Lys Asp Pro Asp Val Ala

Phe Val Asp Ser Cys Leu Gln Lys Ile Pro Gln Asp Arg Pro Thr Ser

Glu Val Leu Leu Lys His Arg Phe Val Leu Arg Glu Arg Pro Pro Thr

Val Ile Met Asp Leu Ile Gln Arg Thr Lys Asp Ala Val Arg Glu Leu

Asp Asn Leu Gln Tyr Arg Lys Met Lys Lys Ile Leu Phe Gln Glu Ala

305 310 315 320 Pro Asn Gly Pro Gly Ala Glu Ala Pro Glu Glu Glu Glu Ala Glu 325 330 Pro Tyr Met His Arg Ala Gly Thr Leu Thr Ser Lou Glu Ser Ser His 345 Ser Val Pro Ser Met Ser Ile Ser Ala Ser Ser Gln Ser Ser Val 360 Asn Ser Leu Ala Asp Ala Ser Asp Asn Glu Glu Glu Glu Glu Glu 375 Glu Glu Glu Glu Glu Glu Glu Glu Glu Gly Pro Glu Ser Arg Glu Met Ala Met Met Gln Glu Gly Glu His Thr Val Thr Ser His Ser Ser Ile Ile His Arg Lau Pro Gly Ser Asp Asn Leu Tyr Asp Asp Pro Tyr Gln Pro Glu Met Thr Pro Gly Pro Leu Gln Pro Pro Ala Ala Pro Pro 440 Thr Ser Thr Ser Ser Ser Ser Ala Arg Arg Arg Ala Tyr Cys Arg Asn 455 Arg Asp His Phe Ala Thr Ile Arg Thr Ala Ser Leu Val Ser Arg Gln 470 Ile Gln Glu His Glu Gln Asp Ser Ala Leu Arg Glu Gln Leu Ser Gly Tyr Lys Arg Met Arg Arg Gln His Gln Lys Gln Leu Leu Ala Leu Glu 505 Ser Arg Leu Arg Gly Glu Arg Glu Glu His Ser Gly Arg Leu Gln Arg Glu Leu Glu Ala Gln Arg Ala Gly Phe Gly Thr Glu Ala Glu Lys Leu Ala Arg Arg His Glm Ala Ile Gly Glu Lys Glu Ala Arg Ala Ala Glm Ala Glu Glu Arg Lys Phe Gln Gln His Ile Leu Gly Gln Gln Lys Lys 565 Glu Leu Ala Ala Leu Leu Glu Ala Gln Lys Arg Thr Tyr Lys Leu Arg Lys Glu Gln Leu Lys Glu Glu Leu Gln Glu Asn Pro Ser Thr Pro Lys

Arg Glu Lys Ala Glu Trp Leu Leu Arg Gln Lys Glu Gln Leu Gln Gln

- Cys Gln Ala Glu Glu Glu Ala Gly Leu Leu Arg Arg Gln Arg Gln Tyr 625 630 635 640
- Phe Glu Leu Gln Cys Arg Gln Tyr Lys Arg Lys Met Leu Leu Ala Arg 645 650 655
- His Ser Leu Asp Gln Asp Leu Leu Arg Glu Asp Leu Asn Lys Cys Gln
 660 665 670
- Thr Gln Lys Asp Leu Glu Cys Ala Leu Leu Leu Arg Gln His Glu Ala 675 2 680 685
- Thr Arg Glu Leu Glu Leu Arg Gln Leu Gln Ala Val Gln Arg Thr Arg 690 695 700
- Ala Glu Leu Thr Arg Leu Gln His Gln Thr Glu Leu Gly Asn Gln Leu 705 710 715 720
- Glu Tyr Asn Lys Arg Arg Glu Glu Glu Leu Arg Gln Lys His Ala Ala 725 730 735
- Glm Val Arg Glm Glm Pro Lys Ser Leu Lys Val Arg Ala Gly Glm Leu 740 745 750
- Pro Met Gly Leu Pro Ala Thr Gly Ala Leu Gly Pro Leu Ser Thr Gly 755 760 765
- Thr Leu Ser Glu Glu Glu Pro Cys Ser Ser Gly Glu Ala Ile Leu 770 780
- Gly Gln Arg Met Leu Gly Glu Glu Glu Ala Val Pro Glu Arg Met 785 790 795 800
- Ile Leu Gly Lys Glu Gly Thr Thr Leu Glu Pro Glu Glu Gln Arg Ile 805 815
- Leu Glu Glu Met Gly Thr Phe Ser Ser Ser Pro Glu Lys His Arg 820 825 830
- Ser Leu Val Asn Glu Glu Asp Trp Asp Ile Ser Lys Glu Met Lys Glu 835 840 845
- Ser Arg Val Pro Ser Leu Ala Ser Gln Glu Arg Asn Ile Ile Gly Gln 850 855 860
- Glu Glu Ala Gly Ala Trp Asn Leu Trp Glu Lys Glu His Gly Asn Leu 865 870 875 880
- Val Asp Met Glu Phe Lys Leu Gly Trp Val Gln Gly Pro Val Leu Thr 885 890 895
- The Gly Thr Pro Arg Asp Pro Gly Asp Gly Cys Pro Ser Pro Asp Ile
- Pro Pro Glu Pro Pro Pro Ser His Leu Arg Gln Tyr Pro Ala Ser Gln

P15

930

935

Leu Pro Gly Phe Leu Ser His Gly Leu Leu Thr Gly Leu Ser Phe Ala

Val Gly Ser Ser Ser Cly Leu Leu Pro Leu Leu Leu Leu Leu Leu

Pro Leu Leu Ala Pro Arg Trp Arg Trp Leu Ala Gly Ser Thr Ala Gly 985

Pro

<210>

<211> 414

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<223> n= a, t, g, or c

<400> 5

acyantcace agttggaagt tactccaaag aatgagcaca aaacaatott aaagacaotg 60 aaagatgago agacaagaaa acttgccatt tnggcagago agtatgaaca gagtataaat 120 gaaatgatgg ceteteange gttacggeta gatgaggete aagaagcaga atgccaggee ttgaggctac agctccagca ggaaatggag ctgctcaacg cctaccagag caaaatcaag 240 atgcaaacag aggcacaaca tgaacgtgag ctccagaagc tagagcagag agtgtetetg 300 cgcagageac accttgagea gaagattgaa gaggagetgg etgcoottea gaaggaacge 360 agcgagagaa taaagaacct attggaaagg caagagogag agattggaaa citt 414

<210> 6

<211> 314

<212> DNA

<213> Homo sapiens

<400>	б						•
gaacaaa	gtc	atgeettaat	agttotgetg	atgttggcct	ttcctgaggt	attttctgca	60
agcagta	Atc	aacaaatctc	ctaaaggagt	ctgtccattc	attagactgt	aacgttgggg	120
agteatt	ctg	ggcaatgtga	tataaggcac	toattgcatt	catgttgaaa	aggggcggct	180
teegtte	e gc	caattcaata	caagtgatge	caagtgacca	aatatcaact	ttcccatcat	240
actgtec	ttc	atccataget	aagatcacct	otggagccat	cca gtaa ggt	gtgcccacga	300
aggagtt	ggc	cagg	•				314
<210> '	7				·		

<211> 370

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<223> n= a, t, g, or c

<400> 7 accasattce casateceat tetgaggete tecatglesa asgittesat eletegetet 60 tgeettteea ataggttett tatteteteg etgegtteet tetgaaggge ageeagetee 120 tetteaatet tetgeteaag gtgtggtetg egeagagaea etetetgete tagettetgg 180 ageteaegtt catgttgtge etetgttngn atettgattt ggntetggta ggegttgage 240 agetecattt eetgetggag etgtageete aaggeetgge attetgette ttgageetea totagoogta acgottgaga ggooatcatt toatttatac totgttcata otgetotgec 360 **aaa**atggcaa 370

<210> 8

<211> 190

<212> DNA

<213> Homo sapiens

caacagcag	a aaaacttaaa	ggccatggaa	atgcaaatta	aaaaacagtt	tcaggacact	60
tgca tagta	e agaccaaaca	gtataaagca	ctcaagaatc	accagttgga	agttactcca	120
aagaatgag	c acaaaacaat	cttaaagaca	etgaaagatg	agcagacaag	aaaacttgcc	180
attt tggc a	g					190
<210> 9		3				
<211> 65						
<212> DN	A					
<213> Ho	mo sapiens					
			•			
<400> 9		•				
gagcagtat	g sacagagtat	aaatgaaatg	atggcctctc	aagcgttacg	gctagatgag	60
gctca						65
<210> 10						
<211> 21	9					
<212> DN	A			•	•	
<213> Ho	mo sapiens					
	٠					•
<220>						
<221> mi	sc_feature	•				
	_	•			•	
12-0	a, t, g, or o	· >		•		
<400> 10	c ccgagagcta	gagtacagge	agetgeacae	qttacagaag	ctacccater	60
	g tttacagcac					
						120
	a actgeacaga			gcaacagcca	aaaaacttaa	180
aggccatgg:	a antgcaattt	<u>aaaaaacagt</u>	tccaggaaa		•	219
<210> 11		,				
<211> 85						

D18

<212> DNA

```
<213> Home sapiens
 <220>
 <221> misc_feature
 <223> n=a, t, g, or c }
 <400> 11
 gtgcatatgg tatatttnat tcatttttgt aaagegttct gttttgtgtt tactaattgg
                                                                     60
 gatgtcatag tacttggctg ccggg
                                                                     85
 <210> 12
 <211> 46
 <212> DNA
 <213> Homo sapiens
 <400> 12
 ctcacttggg tactacagtg tggaagctga gtgcatatgg tatatt
 <210> 13
 <211> 116
<212> DNA
 <213> Homo sapiens
 <400> 13
gatatttggt cattgggtat caegtgtata gagetggeeg aacgtegtee accattgtte
                                                                     60
agtatgaatg caatgtctgc cotctaccat attgctcaaa atgatcctcc aactct
                                                                    116
 <210> 14
<211> 118
```

<213> Homo sapiens

<212> DNA

019

<400> 14

ctgaaaggec tggattatet geacteagag egeaagatee accgagatat caaagetgee	60
aacgtgetge teteggagea gggtgatgtg aagatggeag aetteggtgt ggetggea	118
<210> 15	
<211> 110	
<212> DNA	
<213> Homo sapiens	
<400> 15	
gacccagagg aactottcac caagettgac egeattggca aaggetcatt tggggaggtg	60
tacaagggga tcgacaacca caccaaggaa gtggtggcca tcaagatcat	110
<210> 16	
<211> 134	
<212> DNA	
<213> Homo sapiens	
<400> 16	
toaggattet ggagetetgg agttecatta gtggetatea gatacaatge cetgagtgga	60
titteattaa ggtaaggggg ticacettee accattteaa tigecataat teeaagagae	120
cagalatoaa cttt	134
<210> 17	
<211> 278	
<212> PRT	
<213> Saccharomyces cerevisiae	
<400> 17	
Met Ala Pro Ala Val Leu Gln Lys Pro Gly Val Ile Lys Asp Pro Ser 1 10 15	
Ile Ala Ala Leu Phe Ser Asn Lya Asp Pro Glu Gln Asp Leu Arg Glu 20 25 30	٠

Ile Gly His Gly Ser Phe Gly Ala Val Tyr Phe Ala Tyr Asp Lys Lys 35 40 45

Asn Glu Gln Thr Val Ala Ile Lys Lys Met Asn Phe Ser Gly Lys Gln
50 55 60

Ala Val Glu Lys Trp Asn Asp Ile Leu Lys Glu Val Ser Phe Leu Asn 65 75 80

Thr Val Val His Pro His Ile Val Asp Tyr Lys Ala Cys Phe Leu Lys

Asp Thr Thr Cys Trp Leu Val Met Glu Tyr Cys Ile Gly Ser Ala Ala

Asp Ile Val Asp Val Leu Arg Lys Gly Met Arg Glu Val Glu Ile Ala 115 120 125

Ala Ile Cys Ser Gln Thr Leu Asp Ala Leu Arg Tyr Leu Hie Ser Leu 130 140

Lys Arg Ile His Arg Asp Ile Lys Ala Gly Asn Ile Leu Leu Ser Asp 145 150 155 160

His Ala Ile Val Lys Leu Ala Asp Phe Gly Ser Ala Ser Leu Val Asp 165 170 175

Pro Ala Gln Thr Phe Ile Gly Thr Pro Phe Phe Met Ala Pro Glu Val 180 185 190

Ile Leu Ala Met Asp Glu Gly His Tyr Thr Asp Arg Ala Asp Ile Trp
195 200 205

Ser Leu Gly Ile Thr Cys Ile Glu Leu Ala Glu Arg Arg Pro Pro Leu 210 225 220

Phe Ser Met Asn Ala Met Ser Ala Leu Tyr Ris Ile Ala Gln Asn Asp 225 230 . 235 240

Pro Fro Thr Leu Ser Pro Ile Asp Thr Ser Glu Gln Pro Glu Trp Ser 245 250 255

Leu Glu Phe Val Gln Phe Ile Asp Lys Cys Leu Arg Lys Pro Ala Glu 260 265 270

Glu Arg Met Ser Ala Glu 275

<210> 18

<211> 273

<212> PRT

<213> C. elegans

<400> 18

14:32

Arg Glu Glu Arg Glu Arg Lys Lys Gln Leu Tyr Ala Lys Leu Asn 1 5 10 15

Glu Ile Cys Ser Asp Gly Asp Pro Ser Thr Lys Tyr Ala Asn Leu Val 20 25 30

Lys Ile Gly Gln Gly Ala Ser Gly Gly Val Tyr Thr Ala Tyr Glu Ile 35 40 45

Gly Thr Asn Val Ser Val Ala Ile Lys Gln Met Asn Leu Glu Lys Gln
50 55 60

Pro Lys Lys Glu Leu Ile Ile Asn Glu Ile Leu Val Met Lys Gly Ser 65 70 75

Lys His Pro Asn Ile Val Asn Phe Ile Asp Ser Tyr Val Leu Lys Gly 85 90 95.

Asp Leu Trp Val Ile Met Glu Tyr Met Glu Gly Gly Ser Leu Thr Val 100 105 110

Asp Val Val Thr His Cys Ile Leu Thr Glu Gly Gln Ile Gly Ala Val

Cys Arg Glu Thr Leu Ser Gly Leu Glu Phe Leu His Ser Lys Gly Val

Leu His Arg Asp Ile Lys Ser Asp Asn Ile Leu Leu Ser Met Glu Gly 145 155 156

Asp Ile Lys Leu Thr Asp Phe Gly Phe Cys Ala Gln Ile Asn Glu Leu 165 170 175

Asn Leu Lys Arg Thr Thr Met Val Gly Thr Pro Tyr Trp Met Ala Pro 180 185 190

Glu Val Val Ser Arg Lys Glu Tyr Gly Pro Lys Val Asp Ile Trp Ser 195 200 205

Leu Gly Ile Met Ile Ile Glu Met Ile Glu Gly Glu Pro Pro Tyr Leu 210 215 220

Asn Glu Thr Pro Leu Arg Ala Leu Tyr Leu Ile Ala Thr Asn Gly Thr 225 230 235 240

Pro Lys Leu Lys Glu Pro Glu Asn Leu Ser Ser Ser Leu Lys Lys Phe 245 250 . 255

Leu Asp Trp Cys Leu Cys Cys Val Glu Pro Glu Asp Arg Ala Ser Ala 260 265 270

Thr

<210> 19

```
<211> 33
```

<212> DNA

<213> Artificial

<220>

<223> modified base

<220>

<221> misc_feature

<223> N= inosine

<400> 19
gacgctggat ccaaagatac tggncaaggg ngc

33

<210> 20

<211> 21

<212> DNA

<213> Artificial

<220>

<223> modified base

<220>

<221> misc_feature

<223> n= inosineI

<400> 20

ggngtnecag tingingena t

<210> 21

<211> 28

<212> DNA

<213> Artificial

20

<220>
<223> modified base
<220>

<221> misc_feature

<223> n=inosineI

<400> 21 eaaggaagca nagncagnaa cggaagat

28

<210> 22

<211> 30

<212> DNA

<213> Artificial

<220>

<223> modified base

<220>

<221> misc_feature

<223> n=inosineI

<400> 22 gacgotgaat toacctteng gngccatcca

30

<210> 23

<211> 20

<212> PRT

<213> Rattus norvegicus

<400> 23

Thr Lys Asp Ala Val Arg Glu Leu Asp Asn Leu Gln Tyr Arg Lys Met 1 5 15

09/09/2003

```
Lys Lys Leu Leu 20 <210> 24 <211> 19
```

<212> PRT

<213> Rattus norvegicus

<400> 24

Lys Lys Glu Leu Asn Ser Phe Leu Glu Ser Gln Lys Arg Glu Tyr Lys

15

Leu Arg Lys

<210> 25

<211> 20

<212> PRT

<213> Rattus norvegicus

<400> 25

Arg Glu Leu Arg Glu Leu Glu Gin Arg Val Ser Leu Arg Arg Ala Leu 1 10 15

Leu Glu Gln Lys 20

<210> 26

<211> 8

<212> PRT

<213> Rattus norvegicus

<400> 26

His Arg Asp Ile Lys Ala Gly Asn 1 5